Nursing Informatics in New Zealand: From History to Strategy

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Abstract

As technological advances saw computers become more common, nurses in New Zealand were inspired to look for ways to harness the use of computers and other technologies to aid patient care and their practice. This paper traces the history of the development of nursing informatics in New Zealand from the earliest days in the 1980s through to the present, when nurses have leadership roles in informatics and are represented at the highest levels in national decision making, thereby influencing the development of national strategies. Nurses have developed a strong informatics profile through working collaboratively with other organizations, yet ensuring that the interests of nurses are maintained. In addition, the support from international nursing informatics pioneers and New Zealand nurses contribution to the international nursing informatics community is highlighted.

Introduction

The early beginnings of nursing informatics in New Zealand can be traced back to the early 1980s, although the first national organization was not established until 1991. As outlined in the conclusion of "NINZ: the first 10 years" (1) the development of any group should be viewed in context. Nursing informatics in New Zealand emerged and was active through an era of rapid change and increased reliance on technology in health care. Nursing Informatics took the lead in New Zealand for informatics but by the late 1990s recognised that that there needed to be a combined health informatics focus in New Zealand so the amalgamation with the another major informatics group resulted in the formation of a new group called Health Informatics New Zealand (HINZ). This group and it predecessors aimed at promoting health informatics, providing a forum for education and the promotion of the effective use of health informatics. These groups were providing the foundations to ensure informatics was included in the wider health strategy. Over the past two decades New Zealand underwent a number of health reforms that have lead to the current structure of a National Health Board and an IT Health Board who are responsible for setting strategy. It is now well recognised that clinicians, including nurses, need to be involved at a strategic level so that they can promote the importance of information and technology in influencing positive health outcomes.

Nursing Informatics New Zealand (NINZ)

This section provides a historical overview of the birth and growth of Nursing Informatics New Zealand Incorporated (NINZ) and then its amalgamation with the NZ Health Informatics Foundation (NZHIF) to establish the current national incorporated society, Health Informatics New Zealand (HINZ). Internationally nursing informatics was already well established, with the International Medical Informatics Association (IMIA) establishing Working Group 8 (WG8) to represent nursing interests in 1982 (2), then in 1994 transforming the Working Group into a Special Interest Group for Nursing Informatics referred to as International Medical Informatics Association - Nursing Informatics (IMIA-NI). The triennial Nursing Informatics conferences commenced in 1982 and the fourth conference, in 1991, in Melbourne, Australia became a pivotal event for sparking the interest of New Zealand nurses which led to the establishment of NINZ.

Earlier, in 1986 Canadian nurse Kathryn Hannah visited New Zealand and met with senior nurses from clinical and education settings. Discussions at this meeting focused on what impact an increase in computers in practice and education might have for the nursing profession. Jan Hausman was one of those attending this event (1). There was a growing awareness of the need for New Zealand to become more aware and prepared for nursing informatics. Jan Hausman, from the Department of Nursing at Manukau Polytechnic, was funded by the government to develop a national nursing informatics curriculum, which was finalised and published in 1989 (3). The curriculum identified nursing informatics competencies and associated knowledge, skills and attitudes, and these are, for the most part, still relevant today (4). Despite each New Zealand school of nursing being supplied with the curriculum document and a set of teaching packages and resources, the introduction of nursing informatics varied greatly, with some schools emerging as leaders, often due to having staff with interest and skills in nursing informatics.

In 1990 Jan Hausman circulated a discussion document proposing that New Zealand hold a conference following the upcoming 1991 IMIA-NI conference in Melbourne. Five nurses attended an early planning meeting including Robyn Carr who went on to be chair of IMIA-NI (2006 to 2009). A successful conference with the theme, "Nursing Informatics in New Zealand: An impetus for learning" eventuated, with approximately 100 nurses attending. The conference identified nurses interested in nursing informatics and all participants were invited to a meeting "to set up a National Nursing Informatics Group" (1, p. 31). The objective for the fledgling group was: "To foster throughout New Zealand the development of knowledge and utilisation of information systems within all areas of nursing practice", and the name "Nursing Informatics New Zealand" was adopted (1, p. 32). Terms of reference, aims and goals were developed and the plan was to achieve these through workshops, newsletters and peer-support. The early years of NINZ was led by Jan Hausman, Robyn Carr and Marilyn Appleton. Over the following years Michelle Honey, Lucy Westbrooke and Ann Browett followed in the chairperson's role. NINZ became an incorporated society within a couple of years and established an electronic presence on the internet as well as hosting regular workshops, seminars and conferences.

Nursing informatics in New Zealand became established because of the initiative and drive of a small group. This was supported by advice from international colleagues such as Marion Ball, then president of IMIA during her 1993 visit to New Zealand. She advised that in order to develop as an organisation NINZ and New Zealand should have a representative on IMIA-NI. This role was ably undertaken by Robyn Carr who provided fifteen years of outstanding representation. In 2000 she joined the IMIA-NI Board as secretary, followed by vice chairperson and was chairperson of IMIA-NI from 2006 to 2009. In 2005 the New Zealand representative position on IMIA-NI was taken up by Lucy Westbrooke.

As NINZ grew in strength the suggestion for New Zealand to host the 7th international congress in nursing informatics conference (IMIA-NI conference) in 2000 was raised. After winning the bid in 1995 to host this major event, an organising committee was formed with Michelle Honey as chairperson; Robyn Carr, vice chairperson; Lucy Westbrooke treasurer and website co-ordinator, along with many others. Together the organising committee successfully hosted the 7th International Nursing Informatics Conference (NI'2000) in Auckland.

NINZ was the first health professional informatics group formed in New Zealand. The Health Information Association of New Zealand (HIANZ) was established in 1989 but had a focus on clinical records and health libraries. When initial discussion occurred with the NZHIF about a possible merger, HIANZ was also approached, but because of their different focus they unfortunately declined. As NINZ grew it developed relationships with a range of national and international groups and organisations. The group formed links with other professional bodies, the Ministry of Health and the health information systems vendors. NINZ members were also involved with the establishment of NZHIF which initially had a wider health focus and incorporated the vendor community. This willingness to work with others ensured the viability of nursing informatics in New Zealand.

Health Informatics Foundation

The NZ Health Informatics Foundation was established in 1994 in response to a Ministry of Health suggestion for an impartial organisation to coordinate and sponsor specific projects in health informatics and to promote information sharing across the sector by creating a forum for the users, developers and providers of health information systems and services (5). The main functions of the NZHIF were to: promote health informatics disciplines, distribute nationwide informatics information, provide education on the promotion of the effective use of health informatics, and to provide a forum for the sponsorship of generic research and development projects. NINZ played a leading role in assisting with the initial establishment of the NZHIF, and nurses were on the inaugural executive committee. The NZHIF had a presence at the 1996 NINZ conference and in 1998 the two organisations jointly hosted a national health informatics conference. NZHIF also supported NINZ in 2000 to host the 7th International Nursing Informatics Congress (NI2000).

By the time the NZHIF and Nursing Informatics New Zealand merged in September 2000 to form Health Informatics New Zealand (HINZ), the membership list had grown from approximately 30 organisations and individuals to more than 150, with members representing all sectors of the health sector including health administrators, managers, researchers, educators, doctors, nurses, vendors, hospitals and students.

Health Informatics New Zealand (HINZ)

The formation of HINZ was planned for a number of years but could not proceed until after the IMIA-NI 2000 conference when the accountability and responsibility of hosting the NI'2000 conference was completed by NINZ. Pat Kerr representing NZHIF and Lucy Westbrooke representing NINZ laid the initial ground work for the

amalgamation but in 2000 it fell to the chairs, Alistair Melhuish from NZHIF and Ann Browett from NINZ, to lead the group through the final stages of the amalgamation and formation of the new organisation, Health Informatics New Zealand (HINZ). Ann Browett was appointed as the inaugural chair of HINZ.

Some initial fears that nursing informatics could become lost within a larger health informatics body have not been realised and nurses have always been actively involved in HINZ with all HINZ executive committees having had at least three nurses representing clinical, education, management or informatics roles. This has ensured that the nursing perspective is well represented. Of the five chairs of HINZ to date, two have been nurses; Ann Browett was chair 2001-2003 and Karolyn Kerr from 2006-2008.

HINZ established working groups aligned to the IMIA and IMIA-NI working groups and the first working group established was the Nursing Informatics group. This group receives regular communication about health and in particular nursing informatics related activities and events. There are special seminars that are of interest to nurses held on an ad hoc basis and the NI working group utilises opportunities that arise when international nursing informaticians visit New Zealand to invite them to speak with the group.

Each year HINZ hosts a Health Informatics Conference and one of the invited keynote speakers is a nursing informatics leader. In addition, at the conference the nurses gather during a nursing informatics panel session with a portion of the time devoted to discussion and to ensure nursing informatics networking.

Health informatics education in New Zealand

Due to the size of New Zealand, with 4.4 million people (6) and 40,616 registered nurses (7), separate postgraduate nursing informatics education options have not been viable. Instead four programmes of health informatics education have evolved to provide nurses the opportunity to study informatics in a broad context alongside other health professionals.

At the undergraduate level, nursing informatics has been recognised as important since the early 1990s when Jan Hausman wrote the national nursing informatics curriculum. The national nursing statutory and regulatory body, Nursing Council of New Zealand, does not identify any specific computer skills within the competencies that registered nurses are required to attain; yet the competencies involve information management and communication that may be achieved using computer technology. New Zealand follows international trends in recognizing the progressively more important role health information and communication technologies play to improve patient safety and quality of care for consumers who themselves increasingly access web based health information (8).

Changes in the New Zealand health care system

The New Zealand health system went through rapid changes in the 1990s, including a restructuring which saw the separation of the role of the purchaser from the service provider. This lead to a period of competition between providers that was expected to increase productivity and efficiency in a system still largely funded and controlled by the state, whilst also attempting to ensure that quality was maintained.

Following a review in 2009, changes to the health sector were introduced with the overall objective of 'better, sooner, more convenient health services' (9). The implementation of these changes has been divided into three areas: organisation change, implementation of the recommendations of the review and amendments to legislation to support the changes. One of the recommendations of the review was the establishment of a National Health Board and the formation of a sub-committee, the IT Health Board. The review incorporated a number of informatics related recommendations which included strengthening health information technology and clinical leadership, prioritisation of new technologies and medical devices and addressing procurement from a national perspective. The role of the IT Health Board is to provide leadership on the implementation and use of information systems across the health and disability sector to support the delivery of high quality healthcare through astute health information investments and solutions to support the national health IT agenda.

Better Access to Health Information

By having clinicians, including nurses involved at a strategic level ensures that direction can be set that is aimed at improving health care by recognizing that better access to health information is paramount. This has resulted in a strategy aimed at "better access to information about our health" (10). This is vital if New Zealanders are to receive "better sooner more convenient health care" (9).

The focus of health services is towards more integrated consumer-centred care. Information technology is seen as necessary to provide a consolidated platform for shared care planning between providers as New Zealand works

towards the eHealth Vision: "To achieve high quality health care and improve patient safety, by 2014 New Zealanders will have a core set of personal health information available electronically to them and their treatment providers regardless of the setting as they access health services" (11). This means New Zealanders can be fully involved in their own health care, and clinicians will know a patient's complete health history to provide the best care (10).

Good use of technology is now being extended to improving electronic storage and being able to share information regionally and nationally so it can be accessed from any location by everyone caring for a person including doctors, nurses and allied health professionals. The extended aim is to allow people to have access to their own health information so they are actively participating in their care. The 'shared care' record is seen as particularly beneficial for people with chronic health conditions.

Nurses continuing to make a difference

Nurses in HINZ recognized the need for leadership in multiple areas to ensure a nursing voice is present and heard. This has been achieved by ensuring that nurses are represented on a number of key national committees and boards. Nurses in HINZ resolved to identify the nurse leaders and support them and to strengthen the nursing informatics ties. Not all nurses in key roles are HINZ members, but because New Zealand is a small country most nurses know each other or are networked through membership in our two national nursing organizations which are the New Zealand Nurses Organisation and the College of Nurses Aotearoa New Zealand. HINZ has identified specific liaison people for each organisation.

The Ministry of Health Chief Nurse, Jane O'Malley acts as an advisor to "provide support and advice to the Director General of Health on nursing issues that are important to the Ministry, the Minister of Health and the health and disability sector. She provides expert input into health services planning through collaborative clinical leadership" (12). At the highest strategic level there are nurses on the National Health Board and the IT Health Board. The National Health Board has nursing representation from Mary Gordon, Executive Director of Nursing at Canterbury District Health Board and Marion Guy, past president of the New Zealand Nursing Organisation and board member of the International Council of Nurses. The nursing interest on the IT Health Board is represented by Chris Hendry who is both a nurse and midwife. There are also two nurses, Helen Pocknall and Karen Roach who are board members for Health Workforce NZ, and another nurse serves on the National Information Clinical Leadership Group. Together these nurses ensure the nursing voice is heard in health care planning and decision making in New Zealand, and through them the interests of nursing informatics is preserved.

Conclusion

The early leaders in nursing informatics in New Zealand set the scene for the development of health informatics in New Zealand so that now we have nurses in many areas that are able to influence strategy to ensure that importance of information and technology in improving the health outcomes of New Zealanders is recognised. No longer is informatics seen as a separate area but rather it is becoming ubiquitous in health care. The information and communications technologies are enablers for the strategic direction we are setting in health care. As nurses we need the strategy to empower us to best utilise the information and technology to improve healthcare.

Like most countries the state of health and informatics in New Zealand is connected to the rest of the world and we struggle, as many countries have, with the economic downturn. Economic constraints are keenly felt in a country with a publically funded health system. Health informatics has the potential to reduce duplication, costs and errors while improving communication between providers, integration of services, and safety. The challenge is ensuring nursing representation continues and the needs of nurses in providing quality care are championed.

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